

Remarks

~~Claims 1-8 and 10-34 are in the case and are all rejected. Claim 34 is a new claim~~
and finds basis in claim 27.

We turn now to the rejections.

Claims 1-8, 10-12, 15, 17, 27-31 and 33 are rejected under 35 U.S.C. 103 (a) over Erb et al. (US 5,433,797) in view of Lowenheim and additionally in view of Biberbach et al. (US 3,929,595) and Gonzalez et al. (6,743,346).

Claims 16, 18-25 and 32 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Erb et al. in view of Lowenheim, Biberbach et al. and Gonzalez et al. as applied to claims 1-8, 10-12, 15, 17, 27-31 and 33 further in view of admitted prior art.

Claims 13 and 14 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Erb et al in view of Lowenheim additionally in view of Biberbach et al and Gonzalez et al as applied to claims 1-8, 10-12, 15, 17, 27-31 and 33 and further in view of Uzoh et al (US 7,378,004).

Claim 26 is rejected under 35 U.S.C 103 (a) as being unpatentable over Erb et al in view of Lowenheim in view of Biberbach et el, Gonzalez et al and admitted prior art as applied to claim 16, 18-25 and 32 further in view of Hutkin (US 4,088,544).

Reconsideration of all of the rejections is requested.

The rejections are all submitted to be defective because none of the applied prior art teaches or makes obvious the limitation of claim 1, claim 31 and 33, of a per anode or per cathode area agitation rate of 0.0001 to 10 liters per minute per cm² anode or cathode area”, i.e. a normalized agitation rate on the basis of electrode area.

The action takes the position that” [a]gitation rate normalized to electrode area is considered to be a way of expressing amount of agitation” (page 4 of action) and ~~“agitation rate normalized to electrode area is considered to pertain to amount of agitation”~~ (page 6 of office action.) What is missing is any source cited to evidence a basis for the consideration (conclusion) that agitation rate normalized to electrode area expresses amount of agitation. Apparently the consideration (conclusion) is that of the Examiner and is therefore an ipse dixit and not a legitimate basis for rejection.

The rejection at page 8 says claim 1 “specifies the agitation rate based on the size of the cathode”. This statement is overgeneralization.

What claim 1 recites is a range for agitation rate per, i.e. divided by, area of anode or cathode, something very different from the general term “amount of agitation”.

The rejection seems to imply the claim requires a high rate of agitation. The application at page 5, lines 9-21 indicates differently: namely circulation rates over a wide range of conditions. A clear point of page 5, lines 9-21 is that electrode area is required for normalization and circulation rate per se without this doesn’t provide grain refinement.

The action suggests that Lowenbach’s or Gonzalez’s or Biberbach’s agitation meets the claims. If this is so, why don’t any of these mention obtaining grain refinement (deposit of grain size less than 100nm). Why does not every plating process using Lowenheim’s stirring, result in a grain size of <100nm? Why does Erb introduce pulsing to achieve grains sizes <100nm? According to the office action, shouldn’t the “stirring of Lowenheim” alone which Erb applies suffice to grain refine?

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It is noted that the EPO, German Patent Office and Canadian Intellectual Property Office all concluded that agitation rate normalized to electrode area is different from amount of agitation, i.e. the opposite of the ipse dixit "consideration" (ipse dixit conclusion) in the office action. See copy of EPO claims, Canadian Patent claims and translation of German Patent claims allowed in corresponding European, Canadian and German patent applications. Apparently, the Examiner here is the only one that has concluded that normalized agitation rate is the same as amount of agitation. The rejections are clearly without scientific basis and are therefore defective.

Note that claim 1 obtained in Germany (DE 10262102) is broader than present claim 34.

Note that claim 10 obtained in the EPO embraces claim 27 herein.

Note that claim 1 obtained in Canada and the claim obtained in the second Germany patent (DE10228323) embrace claim 28 herein.

Allowance is requested.

Respectfully submitted,

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